

## PATENT SPECIFICATION

395,891

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## COMPLETE SPECIFICATION.

## Improvements in Moulding Presses.



We, HYDRAULIK GESELLSCHAFT MIT BESCHRÄNKTER HAFTUNG, of 72, Mülheimerstrasse, Duisburg, Germany, a Body Corporate organised and existing according to the Laws of the German State, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

The invention relates to a press for moulding and heating artificial resins and similar substances; the press being provided with interchangeable moulds and the mould which constitutes the die being securely held between pressure members upon a fixed base plate in the standard or pedestal. Such a press is according to the invention provided with two pressure members, which are capable of sliding upon the fixed base plate while being at the same time movable towards each other advantageously by hydraulic means, and with two sliding closure members disposed opposite to each other and movable at right-angles to the pressure members, being applied to the pressure members, and secured in the operative position, while they are retracted from that position at the same time as the pressure members are withdrawn, for the purpose of facilitating the removal of the mould.

One construction of apparatus according to the invention is illustrated, by way of example, in the accompanying drawings.

Figure 1 illustrates the press in longitudinal section, and

Figure 2 shows in plan and partly in section, the part of the apparatus constituting the invention.

Referring to the drawings, the frame 1 is provided with a cylinder for the hydraulically-operated plunger 2 which carries the upper die carrier 3. The plate 4 forms the fixed base on which rest the moulds which serve to produce the outer moulded shape. The mould clamps comprise the pressure members 5, 5 and closure members 6, 6, all of which move on the plate 4. The members 5 are secured to hydraulically-operated pistons

7. The members 6 abut against the lateral end-faces of the pressure members 5 in such a way that all the four members form a chamber open at the top only in which the mould is disposed. Because the members can move towards each other, the dimensions of the moulds to be used can be varied within certain limits. The members 6 are movable transversely to the direction of movement of the members 5; they are pivoted at 8 to levers 9, the fulcrum of which are opposite to each other in pairs and are designated 10. The levers 9 have sloping surfaces 11 at their free ends. Similarly the outside faces of the members 6 slope at their ends at 12. Between each pair of faces 11 and 12 there are provided wedges 13 whose oppositely disposed faces correspond to the surfaces 11 and 12.

The wedges 13 are connected together in pairs by means of transverse members 14 and, as shown in the example illustrated, may be integrally formed therewith. The transverse members 14 are secured to the pistons 15 (which impart a preliminary pressure) whose rods, guided rearwardly through the cylinder blocks 17, are connected together by transverse members 18, which in turn are engaged by retracting pistons 19. Since the members 5, 5 and 6, 6 which form a completely enclosed space, closed at the bottom of the base plate 4, may be adjusted in position, the dimensions of the moulds may vary within wide limits. While the apparatus may be used to clamp moulds formed in parts, the apparatus is also adapted for the reception of an integrally formed mould between the members 5, 5 and 6, 6. The members 5 are moved into their operative positions by the application of pressure to the pistons 7, whereupon the pistons 15 are placed under pressure. The wedge arches 13, 14, which are thus caused to move, leave the sloping faces 11, and are applied against the faces 12 so that the members 6, 6 are pressed against the members 5, 5.

When the moulding of the work in the mould has been completed by means of the plunger 2 and die 3 and the latter has returned to its initial position, the re-

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tracting pistons 19 are subjected to hydraulic pressure. The wedges 13 are thus caused to press against the surfaces 11 and to move the levers 9 outwardly. 5 This causes the members 6 to be retracted laterally with respect to the members 5 so that the mould is released after the water under compression is allowed to escape from the cylinder chambers of the piston 7. 10

No claim is made on this application to a mould for the manufacture of pressed stone blocks of rectangular form in which a closing movement of one pair of oppositely disposed sides also produces a closing movement of the remaining sides. 15

Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim is:— 20

1. A press for moulding and heating

artificial resins, and similar substances, characterised by two mould clamping pressure members which are slidable in opposite directions on the base plate and which act as mould supports, and two closure members which are movable transversely to the enclosed moulds and are applied against the pressure members. 25 30

2. A press according to claim 1, characterised in that the closure members are pressed against the pressure members by movable wedge arches which embrace both closure members. 35

3. A press according to claim 2, employing wedges which in the retraction of the closure members press upon levers linked to the said members.

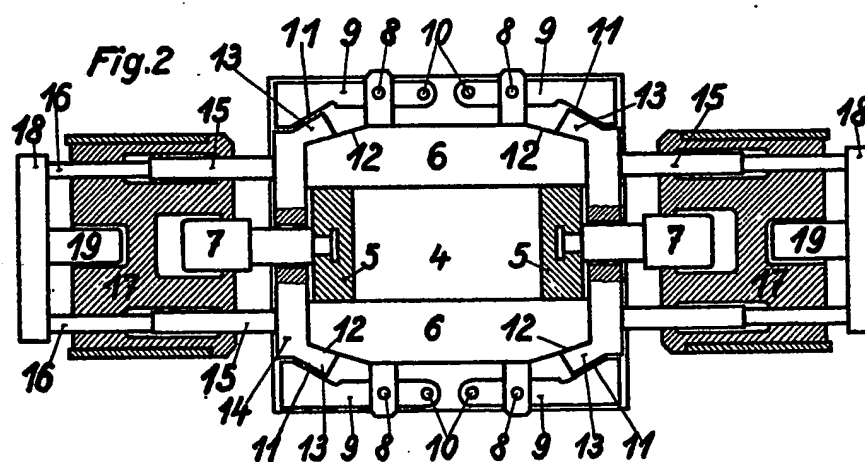
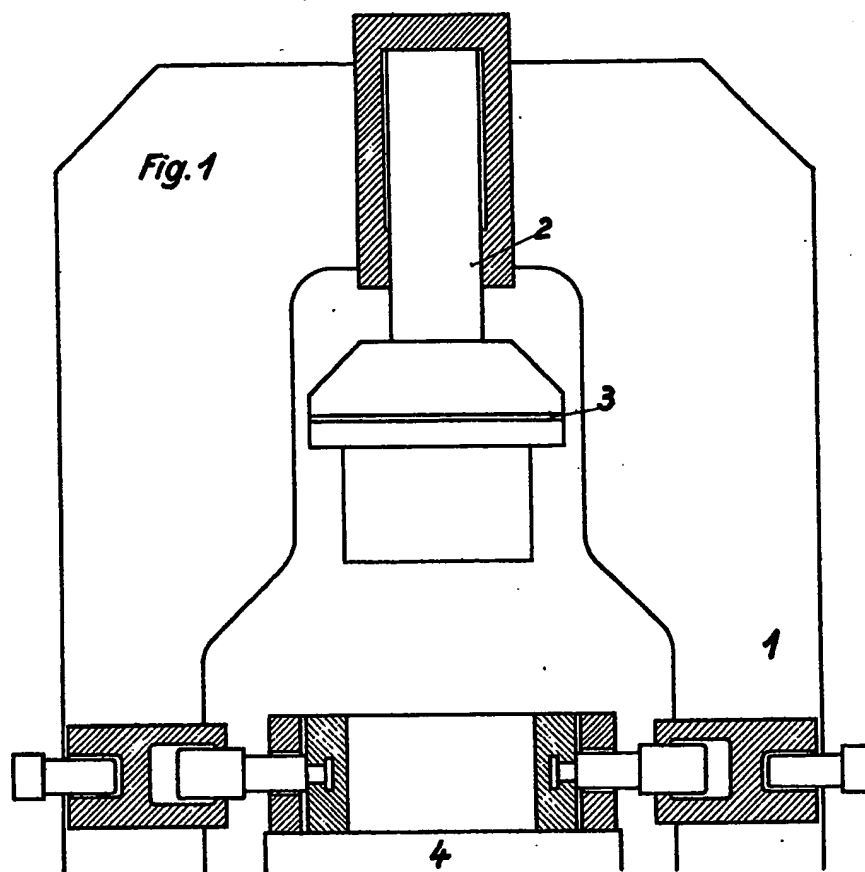
Dated this 6th day of September, 1932.

EDWARD EVANS & Co.,  
27, Chancery Lane, London, W.C. 2,  
Agents for the Applicants.

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